

III, Remarks

A. Rejection Under 35 U.S.C. § 102(b)

The examiner has rejected claims 5 and 47 under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 4,544,666 to Thirumalachar et al. ("Thirumalachar et al.").

Claims 5 and 47 have been canceled. Accordingly, this rejection has become moot.

B. Rejection Under 35 U.S.C. § 103

The examiner has rejected claims 1–10, 12–13, 19–21, 24, 30, 36, 43 and 46–48 under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 6,207,290 to Blum et al. ("Blum et al.") and United States Patent No. 5,654,32 [sic] [5,665,432] to Kuwazuru et al. ("Kuwazuru et al.") in view of Thirumalachar et al. and United States Patent No. 5,397,385 to Watts ("Watts") and Published International Patent Application No. WO 98/54971 to Bessette et al. ("Bessette et al.").

1. Reasons for the Rejection

The examiner has incorporated the reasons for the rejection from a prior Action, dated June 20, 2005. In setting forth the reasons for the rejection, the examiner describes the references as follows (*for ease of reading obvious clerical errors have been corrected*):

Blum, of record, applies reduced toxicity compositions in wood treating methods, showing benzyl alcohol, propylene glycol, isopropyl alcohol as solvents (col. 2, lines 63–line 3, col. 3) Tammine, Tannic acids and essential oils, menthyl anthranilate, menthyl salicylate for example, are also encompassed, at 0.01–10% (col. 4, lines 30–65). However, Blum intends to protect against insects, termites, algae, marine borers, in addition to bacteria and fungi (col. 5, lines 10–20) but with the instant application methods — impregnation or spraying (col. 5, lines 21–27).

Kuwazura, of record, also treats wood, and again shows equivalence of alcohols — ethanol, propanols, glycerol and propylene glycol, among others (col. 2, bottom). However, Kuwazura was not particularly concerned with non-target species toxicity.

Thirumalachar, (above) however, is concerned with toxicity, and provides the instant compositions in low dose formulations non-toxic to plants, but effective to kill bacteria, fungus and other microbes. Thirumalachar at col. 7, top shows any non-toxic carrier acceptable; examples show propylene glycol and glycerol.

Blum's less toxic components are inclusive of those compounds Thirumalachar (col. 1, 2) avoids as too toxic. The Blum carriers, however, are those of Thirumalachar and equivalents, benzyl alcohol, propylene

glycol, isopropyl alcohol, also shown by Kuwazura to include propanyl, thus obvious to one in the art to utilize as desired as equivalent carriers.

Watts also provides wood treating applications to protect against fungi, algae, and marine syanzmer (summary) with other compositions for wood treatments. Watts focuses on essential oils with benzylalcohol or isopropyl alcohol (col. 6, lines 19–27). Thus, one in the art would find it obvious to utilize, as the instant unspecified essential oil, Watt's capsinin in combination with other wood treatment compositions) inclusive of Blum, and Thirumalachar and Kuwazura, in order to optimize control of multiple wood pestes with one treatment application.

Also, Besette shows insect control with Benzyl alcohol and cinnamic alcohol, essential oils and analogs (claims 35–39) thus obvious to include in composition where insects are to be protected against.

One having ordinary skill in the art would be motivated to perform this modification in order to reduce toxicity to operator. Besides Besette, Thirumalachar poses the motivation to combine relatively non-toxic components to treat wood, inclusion of added carrier components are seen as equivalent solvents for the Thirumalachar tannin and tannic acid actives. The compositions one would arrive at as use compositions are at the low end of Applicant's claimed concentrations. They would be as non-toxic as Applicant's, yet effective to control pests.

(Action at page 2, lines 17 to page 4, line 12)

2. Subject Matter of Applicant's Claimed Invention

All of Applicant's claims are directed to a method for the impregnation and treatment of wood comprising the step of applying a non-toxic composition to the wood. The composition either (i) consists essentially of two components selected from two of tannic acid (tannin), benzyl alcohol and propylene glycol or (ii) comprises tannic acid (tannin), benzyl alcohol and propylene glycol.

3. Prior Art Combination Relied on by Examiner

The prior art relied upon by the examiner does not disclose, exemplify or suggest to one skilled in the art Applicant's claimed methods comprising the referenced compositions. Applicant also respectfully disagrees with the examiner's contention that one of ordinary skill in the art would be motivated by the disclosures in the art to obtain Applicant's claimed methods.

In this regard, Applicant intends to introduce evidence demonstrating the unexpected advantages of Applicant's claimed non-toxic composition consisting essentially of benzyl alcohol and tannic acid relative to compositions consisting essentially of benzyl alcohol or tannic acid. As noted below, the prior art does not disclose the above-referenced composition set forth in Applicant's claimed method.

The Thirumalachar et al. Patent, as noted above, is directed to a composition that is:

. . . composed essentially of the tinnate complex of picro ammonium formate combined with a minor amount of a surfactant sufficient to prevent formation of ammonium picrate.

(Abstract).

Accordingly, Thirumalachar et al. teach away from at least Applicant's claims 1–8, 12, 24, 30 and 46–47, which are to a method employing a composition which consists essentially of two components, for reasons set forth above. In addition, although Thirumalachar et al. describe their active ingredient as “relatively non-toxic” to animals and plants, at doses used to control the diseases under consideration (Column 3, lines 56–59 and column 4, lines 52–56), the term “relatively non-toxic” appears to be in comparison to prior art water soluble copper compounds (described at column 2, line 54 to column 3, line 9), which are described as toxic. Accordingly, the Thirumalachar et al. active ingredients are not non-toxic *per se*, but are “relatively non-toxic” [to the copper prior art compounds] at low doses. In contrast, Applicant's claimed compositions are non-toxic. As issues of toxicity are important to users of the composition, this distinction between the Thirumalachar et al. “relatively non-toxic compounds” and Applicant's “non-toxic compounds” is a significant difference in properties. In addition, Thirumalachar et al. do not exemplify, disclose or even suggest to one skilled in the art Applicant's remaining method claims 9–10, 13, 19–21, 36, 43 and 48, which employ a composition comprising benzyl alcohol, propylene glycol, tannin and/or tannic acid.

Bessette et al. is the other reference besides Thirumalachar et al. that is identified by the examiner as posing a “motivation to combine relatively non-toxic components to treat wood.” (Action at page 4, lines 7–10). However, like Thirumalachar et al., Bessette et al. disclose a composition comprising an essential ingredient other than the ingredients in Applicant's claimed composition, which would come outside of Applicant's claims to compositions that consist essentially of at least two of benzyl alcohol, tannic acid and propylene glycol.

The Bessette et al. Published International Application is directed to a pesticide and a method of using the pesticide to kill invertebrates, especially insects, arachnids and larvae. The Bessette method includes preparing a mixture of a carrier with an affector agent, which interferes with the neurotransmitters of the octopamine receptor sites in the insects, arachnids and larvae,

and applying the mixture to insects, arachnids, larvae and their habitat. In the EXAMPLES section, the preferred blend of affector agent is alpha-terpineol, eugenol and cinnamic alcohol. The carrier is acetone. Alpha-terpineol, eugenol and acetone are not set forth in Applicant's claimed compositions, which consist essentially of certain components. The Bessette et al. Published International Application also does not disclose Applicant's claimed composition comprising benzyl alcohol, propylene glycol and tannin or tannic acids. Therefore, like Thirumalachar et al., Bessette et al. do not disclose, exemplify or suggest to one skilled in the art the compositions set forth in Applicant's remaining method claims 9-10, 12-13, 19-20, 36, 43 and 48.

Hence, contrary to the examiner's position, there is no motivation provided by Thirumalachar et al. or Bessette et al. to obtain Applicant's claimed compositions, which consist essentially of certain components or comprise benzyl alcohol, propylene glycol and tannic acid and/or tannin.

As noted above, the examiner looks to Thirumalachar et al. and Bessette et al. to provide one skilled in the art with the motivation to obtain Applicant's claimed composition because of the relatively low toxicity of the Thirumalachar et al. and Bessette et al. compositions. Applicant agrees with the implied position of the examiner that the remaining references cited in the rejection do not provide this motivation. As discussed below, the other references (the Blum et al., Kuwazuru et al. and Watts patents) do not otherwise render Applicant's claims unpatentable.

The Blum et al. patent is directed to antifoulant compositions that include 10, 10¹-oxybisphenoxarsine and/or phenarsazine oxide with a quaternary ammonium salt as an essential ingredient. Applicant's claimed compositions do not include either of these ingredients. In addition, Blum et al. do not disclose compositions comprising benzyl alcohol, propylene glycol and tannin or tannic acid. Accordingly, a critical ingredient in the compositions disclosed in the Blum et al. patent is not an ingredient set forth in Applicant's claims, and Applicant's claims are to compositions that consist essentially of the ingredients recited in the claims or to compositions that comprise a combination of benzyl alcohol, propylene glycol and tannin or tannic acid.

The Kuwazuru et al. patent relates to a process for treating lumber which includes the step of immersing a high moisture content timber in an organic solvent compatible with water. The step is followed by a second step of immersing the timber in a solution comprising a wood preservative and a high boiling point organic solvent, the solution being compatible with the organic solvent. The wood preservatives are identified as wood fungicides, insecticides, insect repellents and so

on. (See Column 3, lines 25–53 and Abstract). The organic solvent and/or wood preservative and high boiling point organic solvent does not comprise benzyl alcohol, propylene glycol and tannin or tannic acid.

Applicant's claimed compositions do not include any of the wood preservatives identified in the Kuwazuru et al. patent. Accordingly, as the wood preservative is an essential ingredient in the Kuwazuru et al. compositions and Applicant's claims are to compositions that consist essentially of ingredients which do not include wood preservatives or comprise benzyl alcohol, propylene glycol and tannin or tannic acid, the Kuwazuru et al. patent cannot and does not disclose or even suggest to one skilled in the art Applicant's claimed compositions.

The Watts patent is entitled and directed to an "anti-fouling coating composition containing capsaicin." (Abstract and Summary of the Invention at column 5, lines 19–21). Watts discloses the addition of benzyl alcohol as a thinning solvent (column 7, lines 38–41), *i.e.*, not an active ingredient in Watts' composition.

Applicant's claimed compositions do not include any of the anti-fouling coating compositions identified in the Watts patent. Accordingly, as the wood preservative is an essential ingredient in the Watts compositions and Applicant's claims are to compositions that consist essentially of ingredients which do not include wood preservatives or comprise benzyl alcohol, propylene glycol and tannin or tannic acid, the Watts patent cannot and does not disclose to one skilled in the art Applicant's claimed compositions.


Furthermore, none of the references exemplifies, or otherwise discloses to one skilled in the art, Applicant's claimed compositions comprising benzyl alcohol, tannin or tannic acid and propylene glycol,. Accordingly, a rejection of Applicant's claims 1–10, 12–13, 19–21, 24, 30, 36, 43 and 46–48 under 35 U.S.C. Section 103(a) over the Blum et al., Kuwazuru et al., Thirumalachar, et al. and Watts patents and the Bessette et al. Published International Application is untenable and should be withdrawn.

IV. Conclusion

It is believed that the above Amendment and Remarks constitute a complete response under 37 CFR Section 1.111 and that all bases of rejection stated in the Official Action have been adequately rebutted and/or overcome. Accordingly, a Notice of Allowance of United States Patent Application Serial No. 10/070,042 is requested as the next Office Action. The examiner is requested to telephone the undersigned attorney if any matters that can reasonably be expected to be resolved in a telephone interview are believed to impede the allowance of pending claims 1-4, 6-10, 12-13, 19-21, 24, 30, 36, 43, 46 and 48.

Respectfully submitted,

DANN DORFMAN HERRELL AND SKILLMAN



John S. Child, Jr.
Registration No. 28,833
1601 Market Street
Suite 2400
Philadelphia, PA 19103-2307
TELEPHONE: 215-563-4100
FACSIMILE: 215-563-4044

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CORRESPONDENCE ADDRESS:
Customer No. 000110
John S. Child, Jr., Esquire
Dann Dorfman Herrell and Skillman
1601 Market Street, Suite 2400
Philadelphia, PA 19103-2307